

Article by Alexander Graham Bell, December 30, 1909

354 3-2-106 THE FREQUENCY WITH WHICH WORDS ARE USED: By Alexander Graham Bell.

Dec. 30: — I have received a letter from a Mr. Wishard of New York dated December 24, suggesting a new means of introducing my father's symbols, in a popular manner, to the people of the United States.

He proposes to print interesting articles in ordinary Roman letters that every one can read, and then gradually introduce into the text words printed in symbols. He would commence by symbolizing the most common words so as to familiarize to eye with the appearance of the new spelling, and finally towards the end of his book the printing would be exclusively in the Melville Bell Symbols.

This seems to be a good idea, and I have been making an investigation to ascertain what are the most common words in use.

I have analyzed a portion of an article contained in the "Outlook" for January, 1910, p 977, by Major-General Leonard Wood, entitled, "Training for War in a Time of Peace". The extract examined ends on p 978 and contains 1088 words.

The following is a list of words occurring ten times or more in this extract. There are only 17 of them; and words belonging to this group occur 480 times in an extract containing 1088 words, so that 44% of the words used belong to this group. It is somewhat noticeable that although the article fairly bristles with poly-syllabic words, this the list of common words contains 2 355 only mono-syllables. The following are the words arranged in the order of frequency:—

The word The occurs 94 times

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“ “ of “ 56 times

“ “ which “ 51 times

“ “ and “ 43 times

“ “ with “ 31 times

“ “ to “ 28 times

“ “ in “ 27 times

“ “ are “ 24 times

“ “ Their “ 32 times

“ “ that “ 18 times

“ “ as “ 15 times

“ “ all “ 13 times

“ “ is “ 13 times

“ “ them “ 12 times

“ “ they “ 12 times

“ “ for “ 11 times

“ “ men “ 10 times

“ “

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The following are the words of less common occurrence:—

9 times:— be, er, troops.

8 times:— general, upon.

7 times:— officers, those.

6 times:— by, care, it, possible, under, war.

5 times:— command, conditions, campaign, duties, every.

4 times:— a, actual, called, have, many, manoeuvres, means, military, much, must, on, operations, perform, soldier, training, will, work.

3 times:— after, also assemble, closely, commence, done, efficiency, especially, feel, greatest, intelligent, large, made, movements, organization, proper, properly, problem, see, same, supply, taken, this, various, what, without, but, etc., realize.

2 times:— animals, application, at, attention, best, carefully, charged, commanders, commanding, corps, departments, details, do, during, executed, execution, experience, even, gradually, handling, importance, inexperienced, infantry, instruction, its, looked, march, methods, most, mounted, nearly, necessary, not, once, only, practically,

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356 2 times:— practice, preparation, really, sea, severe, simulating, small, such, take, time, type, use, very, ways, well, when, would, applying .

1 times:— About, absolutely, acquire, adjusted, advantage, affecting, air, alone, amount, apparently, applying, appearance, art, attempted, appreciate, affected, arrangements, ascertain, almost, accordingly, adopted, against.

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Base, been, before, bodies, both, breaks, bicyclist.

Calls, can, careful, carelessly, cautioned, chafes, circumstances, coast-wise, company, concentration, conducted, confidence, confusion, contribute, controlled, cavalry, criticized, conduct, country, concern, count.

Demands, destroyed, detailed, determined, disappear, discouraged, down, drinking, destructive.

Easy, efficient, either, else, embodies, employed ends, engaged, entirely, equipping, expeditions, existed, entire.

far, fatigued, feed, feet, field, fighting, final, fitted, foot, forethought, found, fullest, future, from, features, first.

gain, generally, give, good, greatly, green, governs, grows.

Halting, hands, has, he, hence, his, hot, hospitals, how.

If, injured, ill, intentions, interested, impressed.

Kind, know, knowledge, keen.

Landings, leave, left, little, look, lose, lost, learn, like, lives.

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357 1 times:— Manner, marching, meals, medical, move, magnitude.

Nothing, numbers,

Object, obviate, occasion, often, operating, opportunity, organize, over, over-sea, opposing, opponent, oftentimes.

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Packs, participated, performance, period, planned, point, points, private, power, position, patrols, principles, profession, people.

Quality, quantity.

Rail, rapid, received, reduced, remember, requires, rest, results, required, representation.

Seeing, served, shade, shiplead, shees, should, simulate, so, some, soon, sprains, staff, stage, steps, stuff, subordinate, successful, sufficient system, systematic, sick, seriously, short, strive, scouts, situation, study, seriousness.

Taught, test, thoughtlessly, thorough, through, too, transparent, transport, though, themselves.

Ultimate, unusual, up, understood, units.

Valuable, value, view, vital, vicinity.

Water, way, weather, whereas, white, who, weapons win.

The total number of words used in the extracts from the "Outlook" amounted to 1088.

The above details show that there were only 361 distinct words used, and that there were many repetitions. The following table shows the number of distinct words, the number of repetitions and the total number of words:—

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| Distinct words | Number of times used | Total words |
|----------------|----------------------|-------------|
| 225 | 1 | 225 |
| 55 | 2 | 110 |
| 29 | 3 | 87 |
| 17 | 4 | 68 |
| 5 | 5 | 25 |
| 6 | 6 | 36 |
| 2 | 7 | 14 |
| 2 | 8 | 16 |
| 3 | 9 | 27 |
| 1 | 10 | 10 |
| 1 | 11 | 11 |
| 2 | 12 | 24 |
| 2 | 13 | 26 |
| 1 | 15 | 15 |
| 1 | 18 | 18 |
| 1 | 22 | 22 |
| 1 | 24 | 24 |
| 1 | 27 | 27 |
| 1 | 28 | 28 |
| 1 | 31 | 31 |
| 1 | 43 | 43 |
| 1 | 51 | 51 |
| 1 | 56 | 56 |
| 1 | 94 | 94 |
| 361 | | 1088 |

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